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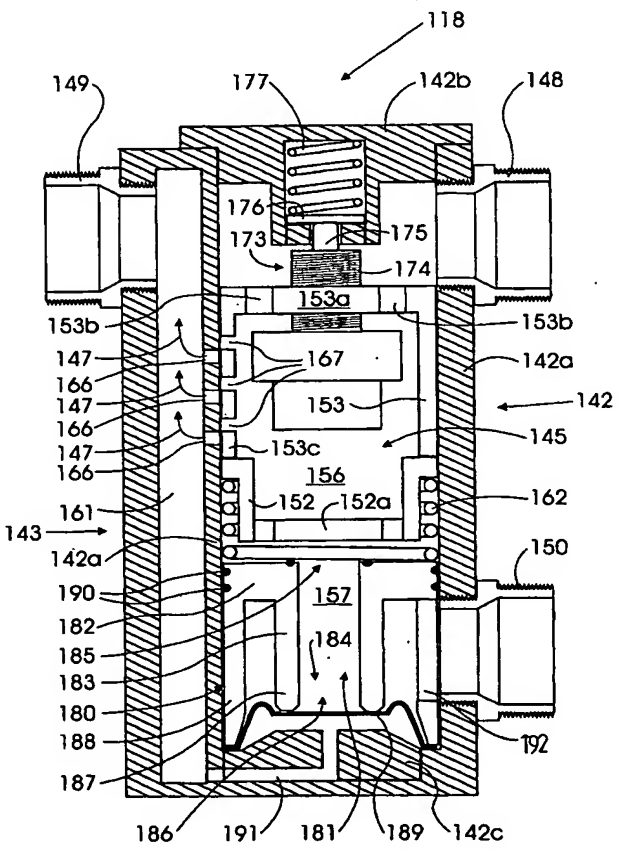
(54) Title: WATER RECOVERY SYSTEMS AND CONTROL VALVES



(57) Abstract: A valve assembly (18) including: a housing (41) having a water supply inlet (48), a hot water outlet (49), a cold water outlet (50), a hot water flow passage (64) between said water supply inlet and said hot water outlet and a cold water flow passage (65) between said water supply inlet and said cold water outlet; hot water valve means (51) in said housing adapted to open said hot water flow passage (64) in response to entry of water above a predetermined temperature into said housing through said water supply inlet and to close said hot water flow passage in response to entry of water below said predetermined temperature into said housing through said water supply inlet; first cold water valve means (51) adapted to open said cold water flow passage (65) at a first position in response to entry of water below said predetermined temperature into said housing through said water supply inlet and to close said cold water flow passage at said first position in response to entry of water above said predetermined temperature into said housing through said water supply inlet;second cold water valve means (80) in series with said first cold water valve means and adapted to open said cold water flow passage (65) at a second position in response to a predetermined drop in pressure at said hot water outlet and to close said cold water flow passage at said second position in response to a predetermined increase in pressure at said hot water outlet.

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